

MIYAZAKI - 10/646,782
Client/Matter: 061069-0305699

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A focal-plane shutter for digital still cameras, comprising:
two base plates provided with a blade chamber between the two base plates, each having an aperture for exposure at about a center; and
a plurality of arms pivotally mounted to one of the two base plates; and
a shutter blade group having ~~a plurality of arms pivotally mounted to one of the two base plates~~ and at least one blade pivotally supported by means of a plurality of joint shanks with respect to the plurality of arms, placed in the blade chamber so that heads of the joint shanks project toward a photographer side,
wherein the plurality of arms have a surface hardness of 500-600 Hv,
wherein, of the two base plates, a base plate placed on the photographer side has at least one convex portion ~~metal-plated on an object-side surface thereof, the convex portion being plated with metal so as to have a surface hardness of 450-500 Hv~~ and the arms ~~slide along~~ come in slide contact with the convex portion and are shifted ~~[[to]]~~ toward the object side immediately before each of the heads of the joint shanks, which had moved from inside the aperture, has reached a position at an edge of the aperture in an actuation of the shutter blade group ~~reach a position corresponding to an edge of the aperture.~~
2. (Cancelled)
3. (Currently amended) A focal-plane shutter for digital still cameras according to claim ~~[[2]]~~ 1, wherein a material of metal plating of the convex portion is palladium and each of the arms is made in such a way that after carbon tool steel is immersed in an alkaline solution to form a black oxide film, chromate treatment is applied to the steel, or titanium is nitride-treated.
4. (Currently amended) A focal-plane shutter for digital still cameras according to any one of claims ~~[[1-3]]~~ 1, 3 and 9, wherein the convex portion is configured so that the object-

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side surface of a member mounted to the base plate placed on the photographer side is spherical.

5. (Currently amended) A focal-plane shutter for digital still cameras according to any one of claims [[1-3]] 1, 3 and 9, wherein the base plate placed on the photographer side is made of synthetic resin, and the convex portion is configured integral with the base plate made of synthetic resin so that the object-side surface is spherical.

6. (Currently amended) A focal-plane shutter for digital still cameras according to any one of claims [[1-3]] 1, 3 and 9, wherein space between the two base plates is partitioned by an intermediate plate, the shutter blade group is placed between the intermediate plate and the base plate placed on the photographer side, and an additional shutter blade group pivotally supporting at least one blade by means of joint shanks with respect to a plurality of arms pivotally mounted to the one base plate is placed between the intermediate plate and a remaining base plate.

7. (Currently amended) A focal-plane shutter for digital still cameras according to claim 4, wherein space between the two base plates is partitioned by an intermediate plate, the shutter blade group is placed between the intermediate plate and the base plate placed on the photographer side, and an additional shutter blade group pivotally supporting at least one blade by means of joint shanks with respect to a plurality of arms pivotally mounted to the one base plate is placed between the intermediate plate and a remaining base plate.

8. (Currently amended) A focal-plane shutter for digital still cameras according to claim 5, wherein space between the two base plates is partitioned by an intermediate plate, the shutter blade group is placed between the intermediate plate and the base plate placed on the photographer side, and an additional shutter blade group pivotally supporting at least one blade by means of joint shanks with respect to a plurality of arms pivotally mounted to the one base plate is placed between the intermediate plate and a remaining base plate.

9. (New) A focal-plane shutter for digital still cameras, comprising:

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two base plates provided with a blade chamber between the two base plates, each having an aperture for exposure at about a center;

a plurality of arms pivotally mounted to one of the two base plates; and

a shutter blade group having at least one blade pivotally supported by a plurality of joint shanks with respect to the plurality of arms, placed in the blade chamber so that heads of the joint shanks project toward a photographer side,

wherein, of the two base plates, a base plate placed on the photographer side has at least one convex portion on an object-side surface thereof, the convex portion being plated with metal,

wherein the arms come in slide contact with the convex portion and are shifted toward the object side immediately before each of the heads of the joint shanks, which had moved from inside the aperture, has reached a position at an edge of the aperture in an actuation of the shutter blade group,

wherein a surface hardness of the convex portion metal-plated is substantially the same as a surface hardness of each of the arms, and

wherein a material of metal plating of the convex portion is palladium and each of the arms is made in such a way that after carbon tool steel is immersed in an alkaline solution to form a black oxide film, chromate treatment is applied to the steel, or titanium is nitride-treated.